

**Public Comment, 2021 Spring NOSB meeting  
April 22, 2021**

My name is Melody Morrell, and I am the Executive Director of The Cornucopia Institute. Thank you, NOSB members, for your important efforts.

Cornucopia is steered by numerous organic farmers, all of whom take careful pains to feed the soil biota, which feeds the plants via an array of complex and interdependent relationships.

Authentic organic grain farmers may choreograph more than a dozen crops in a rotation, interrupting pest and disease cycles, helping prepare nutrients for each succeeding crop right there in the soil, building humus and life below the surface, and holding water rather than allowing it to run off.

But Cornucopia also hears reports of grain farmers, attracted to organic production for the higher price point, short-circuiting their organic rotations to include only two or three crops. Without thoughtful crop rotation, off-farm inputs become crucial, from fertilizer to pest control.

The availability of ammonia extracts discourages continual improvement in soil biological activity, biodiversity, and farm management practices. Conferring nitrogen directly to the plant roots is a quick fix. Ammonia extracts and other highly soluble nitrogen fertilizers are not compatible with organic agriculture. Cornucopia supports the petition to add nonsynthetic ammonia extracts to the list (§205.602) of substances prohibited for use in organic crop production.

Cornucopia is equally interested in protecting the microbiome inside the human body.

We have been in touch with hundreds of individuals who have suffered colitis and incapacitating gut pain from ingesting carrageenan. With this handling material up for sunset review in 2023, industry continues to insist that this ingredient is safe. Can we trust this assertion when it's rooted in the same studies these companies fund?

Independent research, including several studies published after the 2016 TR, suggests carrageenan *is* harmful to human health. We request that the Board watches for potential conflicts of interest in studies published by industry.

Despite its reputation as a safe and natural product of seaweed, commercially available carrageenan is extracted via volatile synthetic solvents. The NOSB would have re-classified carrageenan as a synthetic substance in 2016 had they not recommended its removal from the National List.

But, despite that NOSB recommendation, the NOP re-listed carrageenan in 2018. Industry claims it is *necessary*. Meanwhile, more than a dozen companies, including Organic Valley, Orgain, Horizon, Silk, and Eden Foods, have reformulated their products in order to remove carrageenan.

Some have suggested that carrageenan is easily avoided by reading the label ingredient statement. Consumers contacting Cornucopia disagree. Unfortunately, when used as a processing aid, as in beer, or when used in cream that is itself an ingredient in another product, such as ice cream, carrageenan will not be listed on the label.

Cornucopia requests the NOSB remove carrageenan from the National List. Chemical fixes are endemic to the food system. But they have no business in organic.